

76 03037

September 19, 1974

Brett C. Ross, Public Utilities Director

James J. Hagan, Public Utilities Administrative Assistant

SUBJECT: Work Management Program Annual Report for
Fiscal Year 73-74.

Adm. Methods Work measure
Labor prod. Civil employee
Riverside

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1. SUMMARY

A. 1973-74 Compared with previous year:

Productivity has remained above the expected normal performance of 85% in both Electric and Water Divisions. DEC 2 1975

The Electric Division had an average performance level this fiscal year of 86.6%, an increase of .3% over the prior year. This performance resulted in a net savings of \$128,376 for the Division.

For the Water Division this fiscal years average performance level was 85.9%. That represents a decrease of .6% compared to the prior year. The net savings to the Division was \$201,726 for the fiscal year, in spite of the minor decrease in performance. These savings are discussed further in each Division's analysis.

B. 1973-74 Compared with base period.

The table on page i of the appendix illustrates the effectiveness of the Work Management Program since its inception.

The Electric Division has had an overall increase of 17.2% since the program's inception, with a net savings of \$363,510 since that time.

The increases for the Water Division are even more dramatic. They have had an overall performance increase of 36.6%, with a corresponding cumulative net savings of \$505,136.

2. ANALYSIS

A. Methods and Standards Section.

The Work Management Program Team, assigned to the Administrative Division, consists of four Methods and Standards Technicians, two each working with the Electric and Water Divisions. They are supervised by one Senior Methods and Standards Technician, who in turn, reports to the Administrative Assistant.

The Technicians analyse most work assignments for the Field Operating Forces, assign MTM based Work Measurement Standards to the various tasks, and in conjunction with Field Supervision, schedule the tasks for completion by the operating crews.

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2. ANALYSIS (Cont.)

A. Methods and Standards Section (Cont.)

They supply work order related data to the Data Processing Division where it is merged with the financial data base. Various management reports are then generated, such as the open and closed work order reports, and various job cost reports. These reports are then distributed to various levels of Utilities Management.

The Scheduling Section maintained a coverage level, which means they measured work via standards application, of 65.3% and 66.5% of all the work performed this fiscal year by the Electric and Water Divisions, respectively.

The cost of this program for fiscal year 73-74 was \$100,212 (See page iv of the appendix).

According to the program savings statement (page ii of the appendix), this cost represents 23.3% of the gross program savings of \$430,314, leaving a net savings of \$330,102 for the year. The increased cost savings benefits for this fiscal year, when compared to prior years, is due to a new method of computing the cost savings. Prior to this year, the calculations ignored those man hours that were expended but not measured. Various "Experts" in the field of work management, such as H.B. Maynard and Co., contend that this type of work, though unmeasured by direct standards application, also tends to improve in performance due to the sheer momentum of the program. Therefore, for cost savings computation, these actual hours not on standard are converted to equivalent earned (standard) hours by dividing them by the average performance increase, which is the mean of the base period performance and the current performance.

The use of this new technique is self evident on the quarterly cost savings reports, for each Division, located in the appendix of this report.

B. Electric Division

As was mentioned in the summary, the Electric Division Field Forces are performing at 86.6% of standard. This level is slightly above the expected norm of 85%, and most likely cannot be increased further without the implementation of some type of incentive program. This possibility is being explored by the Department Management.

This performance level has resulted in gross dollar savings of \$96,464 for this fiscal year. This savings is not actual cash, but rather it is more work being accomplished for each dollar spent when compared to the base period. This is graphically shown on page V of the appendix.

2. ANALYSIS (Cont.)

B. Electric Division (C0nt.)

In addition, through prudent management at all levels, the Division has reduced its manpower level at various points throughout the year, to a point that seven (7) positions are now vacant. The data presented on pages vii and viii of the appendix, shows a net decrease of 2.9 men for the fiscal year. This equates to a savings, based on the type classifications reduced, of \$39,510 for the fiscal year. This is an actual cash savings which should be even greater in fiscal year 74-75.

Added to this is the savings due to the increased output of Field Supervision related to the Division's performance level. This amounts to \$42,575 (See page iii of appendix).

The total gross savings for the Division this fiscal year was \$178,549. After subtracting the Division's share of the program's operating expenses of \$50,173, this leaves a net savings of \$128,376.

The Division's Management and personnel are to be commended for a fine job, especially the Division's frugal use of manpower in this era of rising costs.

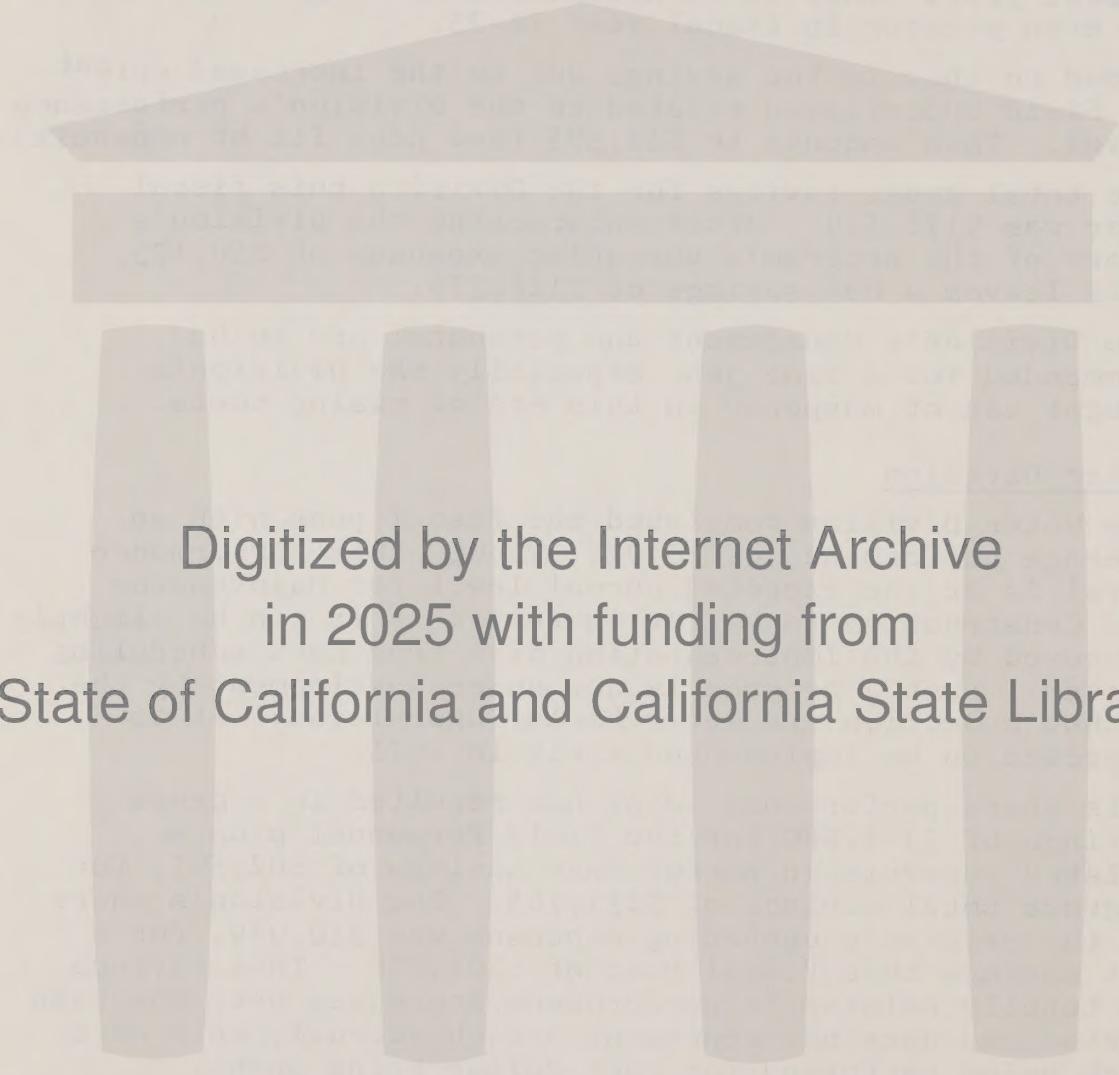
C. Water Division

The Water Division completed the fiscal year with an average performance of 85.9%. Though this performance level is at the expected normal level for Maintenance and Construction tasks, it is felt that it can be slightly improved by the implementation of a true work scheduling system. Such a program is now under development by the Method's Section and Water Field Supervision. It is expected to be implemented early in 1975.

This years performance level has resulted in a gross savings of \$189,260 for the Field Personnel plus a related supervision performance savings of \$62,505, for a gross total savings of \$251,765. The Division's share of the program's operating expenses was \$50,039, for a net savings this fiscal year of \$201,726. This savings is totally related to performance increases over the base period and does not represent a cash accrual; only more work being performed for each dollar being spent.

For the Water Division there were no real cash savings this year, as the Division did not have any manpower decreases. Due to the acquisition of the Southwest Water Company territory in La Sierra, the Division increased it's staffing 5 positions during the fiscal year, for a net increase of 4.5 men. (See page ix of the appendix).

In order to further increase the effectiveness of the Maintenance & Operations Section of the Division, four (4) of these positions were Foremen classifications. It is planned to expand the Division an additional eleven (11) positions during fiscal year 74-75.



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3. GOALS FOR FISCAL YEAR 74-75

A. Crew Scheduling System.

The Planning and Scheduling Section is developing, in conjunction with Field Operations Management, a new scheduling system for the Water Division's Construction and Maintenance Crews. This new system should reap higher productivity benefits for the Division in the coming years. It will also free Field Supervisorial Personnel from some of the mundane clerical tasks that now occupy their time and free them for their prime concern; that of supervising the Division's forces.

It is expected to implement the new scheduling system on, or about, Jan. 2, 1975.

B. Work Measurement.

The ongoing program of updating benchmark standards will continue, as this is a never ending task.

It is also planned to develop new criteria to measure functions not covered in the past. These areas are:

- 1 - Transformer Maintenance Shop
- 2 - Sub-station Construction
- 3 - Pump Operators
- 4 - Irrigation Section

It might be mentioned that this program will be totally successful only in the event that the two Technicians, one each from Electric and Water, are finally selected for training. It will be their training assignment to develop, under experienced guidance, the benchmark standards in these new areas, and to implement the measurement criteria via the work order system.

C. Data Processing Reports.

Testing is already underway with a new Data Processing System. It is planned to install this system in the Public Utilities Department during fiscal year 74-75.

The new series of programs and reports (System) were developed by a consortium representing the Parks and Recreation Department, the Public Utilities Department, and the Data Processing Division. Simply stated, they are a merger of our present work management and budget reports. The system will present all work performed via measurement criteria and job cost. It should prove to be of great value to all levels of Utility Management.

4. CONCLUSION.

Through the application of pre-determined time values to the majority of tasks performed by the Department's Field Crews, the Work Management Program continues to promote increased productivity. This productivity increase manifests itself mainly as more work being performed for each labor dollar spent, plus actual cash savings due to manpower decreases. As the graphs indicate (Pages v & vi of appendix) the labor cost per earned (Standard) hour have held fairly level in spite of the continuing increases in employee wages and benefits, resulting in considerable cost savings.

This is not to say that the application of benchmark standards is wholly responsible for the improved performance levels or the manpower reductions. No work management system is a panacea. If an organization does not have responsible management employees, all the benchmark applications will be of no benefit; just so much paperwork. But to have good management and a work management program coupled together, both striving to attain the same goal, is a very powerful tool. That has been the case here in the Utilities Department, and the proof is in the savings so far accrued.

JJH/RT/jd

APPENDIX

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City of Riverside
 Public Utilities Department
 Performance and Savings
 Analysis Since Program Inception
 For Year Ending 6-27-74

73-74 Compared with Base Period:

<u>Performances:</u> <u>DIVISION</u>	<u>BASE PERIOD</u>	-----Average Yearly Performances-----					<u>Performance Increase Over Base Period</u>
		<u>69-70</u>	<u>70-71</u>	<u>71-72</u>	<u>72-73</u>	<u>73-74</u>	
<u>ELECTRIC</u>	73.9	78.6	83.3	83.4	86.3	86.6	17.2%
<u>WATER</u>	62.9	62.3	79.5	84.6	86.4	85.9	36.6%

<u>Dollar Savings:</u> <u>DIVISION</u>	----- Net Savings Per Fiscal Year -----					<u>Program Savings Inception to Date</u>
	<u>69-70</u>	<u>70-71</u>	<u>71-72</u>	<u>72-73</u>	<u>73-74</u>	
<u>ELECTRIC</u>	78,000	102,900	54,234	128,376		\$363,510
<u>WATER</u>	(Not Calc. partial year)	98,000	107,500	97,910	201,726	\$505,136
<u>Total Net Savings</u> -----						\$868,646

**City of Riverside
Public Utilities Department
Work Management Program Savings Statement
Year Ending June 27, 1974**

Program Savings:

Increased Productivity:

Electric Division	\$96,464
Water Division	<u>\$189,260</u>

285,724

**Productivity Benefits Related
to Field Supervision:**

Electric Division	42,575
Water Division	<u>62,505</u>

105,080

Manpower Reductions:

Electric Division	39,510
Water Division	<u>--</u>

39,510

Gross Annual Savings

430,314

Program Costs:

Salaries Expense:

Electric Division	41,973
Water Division	<u>41,839</u>

83,812

Services Expense:

Electric Division	8,200
Water Division	<u>8,200</u>

16,400

Total Annual Expenses

100,212

Net Annual Savings

\$330,102

Cost Reduction Benefits Related To Supervision
Fiscal Year 73-74

ELECTRIC DIVISION:

2 - Electric Operations Supervisors (2x18,612)	\$37,224
10 - Electric Operations Foreman (10x16,080)	<u>160,800</u>
Sub Total	198,024
25% Overheads	<u>49,506</u>
 Total Expenses	 247,530
Performance Increase Over Base Period	x .172
Annual Cost Benefit	<u>\$42,575</u>

WATER DIVISION:

2 - Water Operations Supervisors (2x16,452)	\$32,904
7.3 - Water Foreman (1) (7.3x14,208)	<u>103,718</u>
Sub Total	136,622
25% Overheads	<u>34,156</u>
 Total Expenses	 170,778
Performance Increase Over Base Period	x .366
Annual Cost Benefit	<u>\$62,505</u>
 TOTAL COST REDUCTION BENEFIT (ELECTRIC & WATER)	 <u>\$105,080</u>

(1) Fiscal Year Average

Work Management Program Expenses
Fiscal Year 73-74

ELECTRIC DIVISION:

Salaries Expenses:

2 - Methods and Standards Technician III	\$27,715
25% Overheads	6,929
$\frac{1}{4}$ - Administrative Assistant ($\frac{1}{2}$ Year only)	2,056
25% Overheads	514
$\frac{1}{4}$ - Methods and Standards Technician III (Sr.)	3,807
25% Overheads	952

Total Salaries Expense:

41,973

Services Expense:

Data Processing Services	6,700
Miscellaneous Services	<u>1,500</u>

Total Services Expense:

8,200

Total Expense, Electric Division:

\$50,1

WATER DIVISION:

Salaries Expenses:

2 - Methods and Standards Technician III	\$27,608
25% Overheads	6,902
$\frac{1}{4}$ - Administrative Assistant ($\frac{1}{2}$ Year only)	2,056
25% Overheads	514
$\frac{1}{4}$ - Methods and Standards Technician III (Sr.)	3,807
25% Overheads	952

Total Salaries Expense:

41,839

Services Expense:

Data Processing Services	6,700
Miscellaneous Services	<u>1,500</u>

Total Services Expense

8,200

Total Expense, Water Division

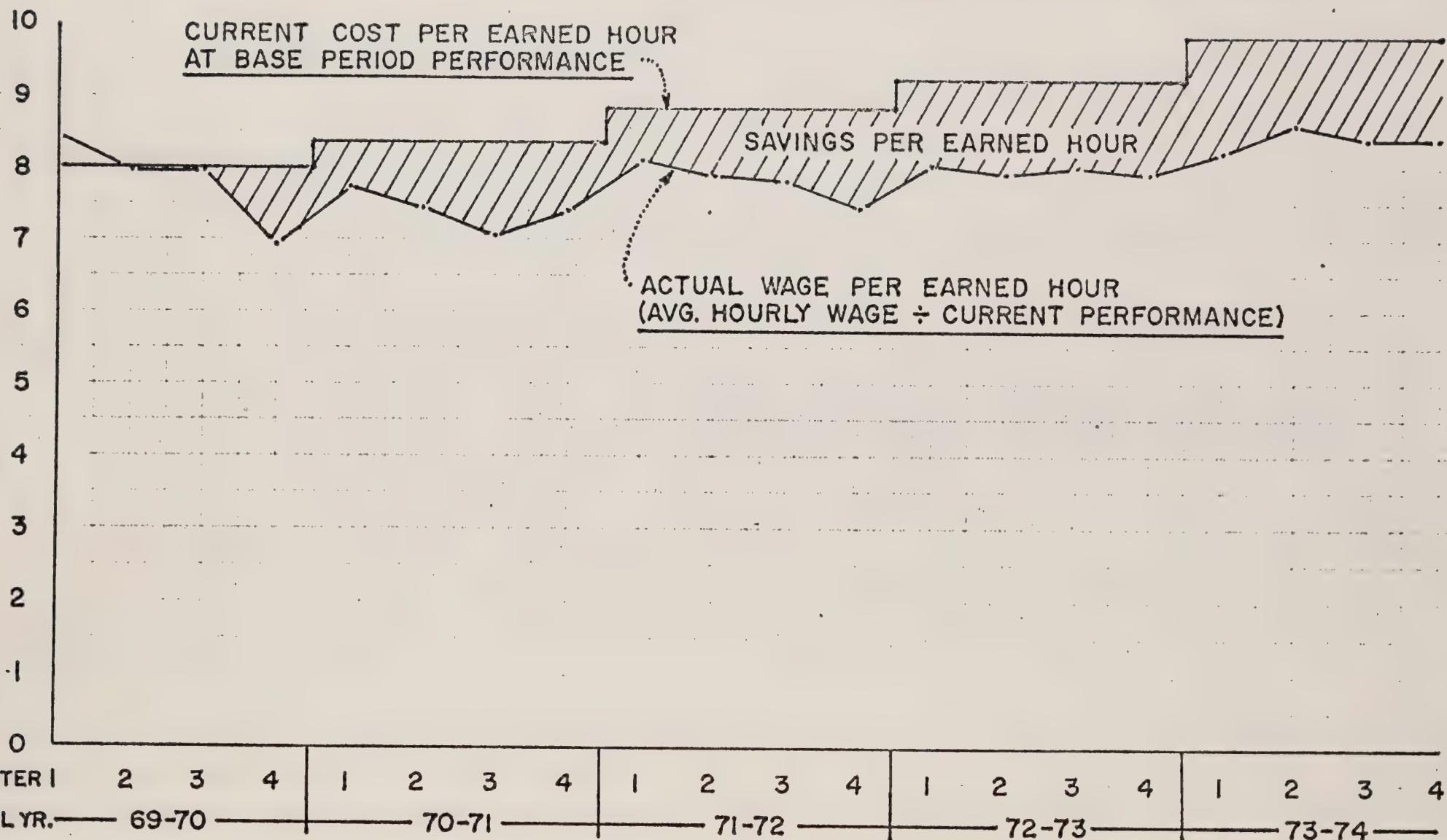
\$50,0

TOTAL EXPENSE FOR FISCAL YEAR 73-74

\$100,2

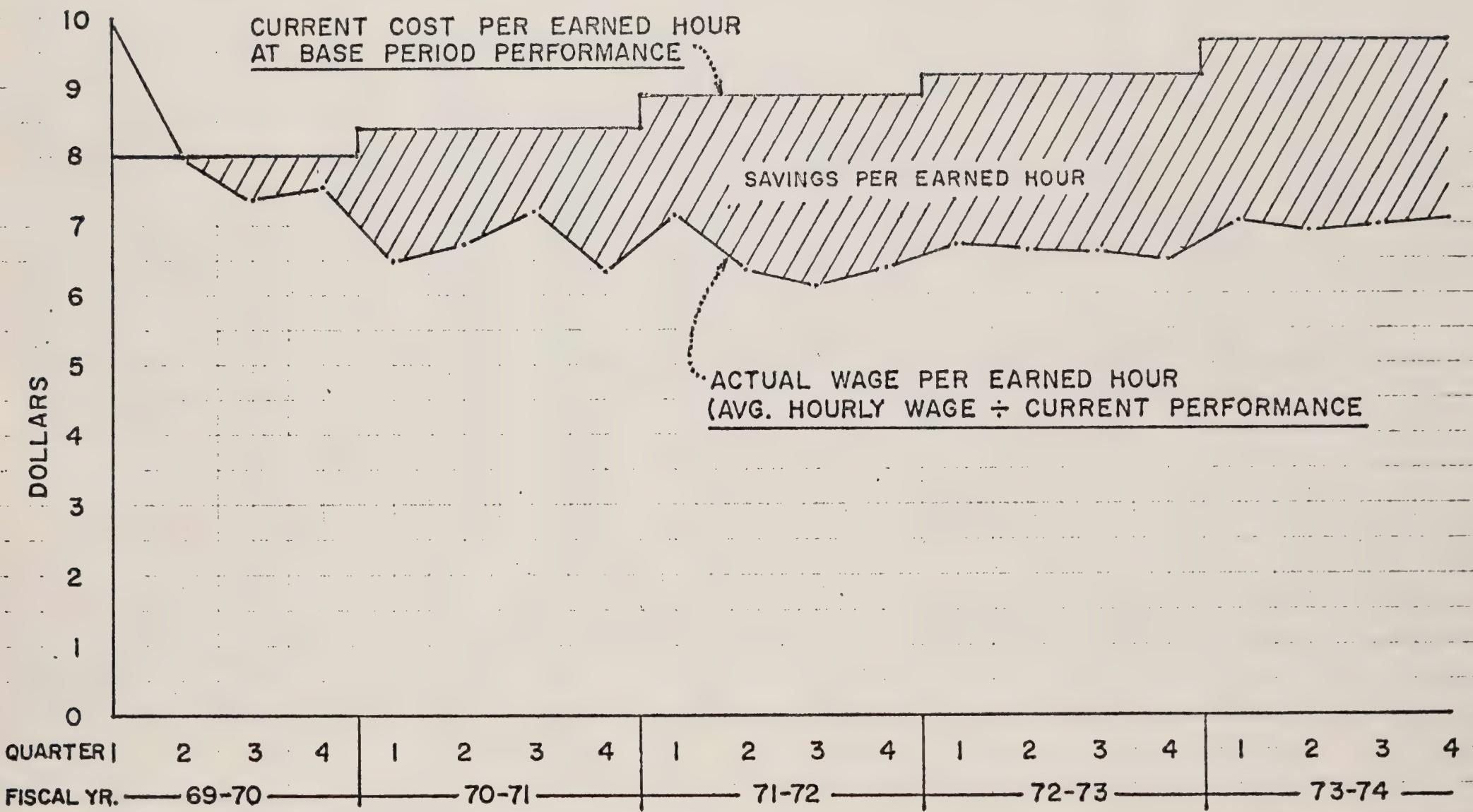
CITY OF RIVERSIDE
PUBLIC UTILITIES DEPARTMENT
ELECTRIC DIVISION

PERFORMANCE INCREASE SAVINGS PER EARNED LABOR HOUR (INCLUDES OVERHEADS)



CITY OF RIVERSIDE
PUBLIC UTILITIES DEPARTMENT
WATER DIVISION

PERFORMANCE INCREASE SAVINGS PER EARNED HOUR (INCLUDES OVERHEADS)



ELECTRIC DIVISION
MANPOWER REDUCTION ANALYSIS
FISCAL YEAR 73-74

CLASS	July		Aug.		Sept.		Oct.		Nov.		Dec.		Jan.		Feb.		Mar.		Apr.		May		June			
	A	+	-	A	+	-	A	+	-	A	+	-	A	+	-	A	+	-	A	+	-	A	+	-	A	+
C&M MAN	5		5		5		5		5		5		5		5		5		5		5		5		5	
HEAV. EQ. OP.	1		1		1		1		1		1		1		1		1		1		1		1		1	
TREE TRIMMER	2		2		2		2		2		2		2		2		2		2		2		2		2	
GROUNDMAN	7		7		6	(1)	6		6		6		6		6		6	(1)	5	(1)	5		5		5	
CREW ASSISTANT	7		7		7		7		7		7		7		7		6	(1)	5	(1)	5		5		5	
ST. LT. PATROL	1		1		1		1		1		1		1		1		1		1		1		1		1	
TREE FOREMAN	1		1		1		1		1		1		1		1		1		1		1		1		1	
APPRENTICES	10		10		10		10		9	(1)	8	(1)	4	(4)	4	4	4	4	4	4	4	4	4	3	(1)	13
LINEMAN	13		13		13		13		13		13		13		13		13		13		13		13		13	
TROUBLEMAN	3		3		3		3		3		3		3		3		3		3		3		3		3	
CABLESPLICER	6		6		6		6		7	1	7		11	4	11		11		11		11		11		11	
SERVICE FOREMAN	3		3		3		3		3		3		3		3		3		3		3		3		3	
OPS. FOREMAN	9		9		9		9		9		9		9		9		9		9		9		9		9	
SUB. CON. FOR.	1		1		1		1		1		1		1		1		1		1		1		1		1	
METERMAN	3		3		3		3		3		2	(1)	2		2		2		2		2		2		2	
SR. METERMAN	1		1		1		1		1		1		1		1		1		1		1		1		1	
SUB. TECH.	1		1		1		1		1		1		1		1		1		1		0	(1)	0	0	0	
SR. SUB. TECH.	2		2		2		2		2		2		2		2		2		3	1	3	1	3	1	3	
TRANS. TECH.	1		1		1		1		1		1		1		1		1		1		1		1		1	
MANPOWER TOTAL	77		77		76		76		76		74		74		74		73		71		71		70		70	
NET CHANGE					(1)						(2)						(1)	(2)							(1)	

Fiscal Years Average Reduction $\frac{35}{12} = 2.9 = \text{MEN}$

Yearly Savings = Number men x yearly paid hours x avg. hourly wage = 2.9 (2080) (6.55) = \$39,510

ELECTRIC DIVISION
AVERAGE HOURLY WAGE CALCULATION
FIELD PERSONNEL REDUCTION

	<u>f</u>	<u>x</u>	<u>xf</u>
GROUNDMAN	2	4.74	9.48
CREW ASSISTANT	2	5.23	10.46
APPRENTICE	2	5.77	11.54
METERMAN	<u>1</u>	5.23	<u>5.23</u>
	<u>7</u>		36.71

$$\bar{x} = \frac{\sum xf}{\sum f} = \frac{36.71}{7} = \$5.24$$

Average hourly wage = \$5.24 + 25% Overhead =
 $5.24 + 1.31 = \$6.55$

WATER DIVISION
MANPOWER INCREASE ANALYSIS
FISCAL YEAR 73-74

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CLASS	July		Aug.		Sept.		Oct.		Nov.		Dec.		Jan.		Feb.		Mar.		Apr.		May		June	
	A	+-	A	+-	A	+-	A	+-	A	+-	A	+-	A	+-	A	+-	A	+-	A	+-	A	+-	A	+-
C&M MAN	22		21	(1)	19	(2)	19		18	(1)	18		20	2	18	(2)	16	(2)	18	2	18		18	(1)
SR. C&M MAN	5		8	3	8	(1)	8		8		7	(1)	7		7		9	2	9		9		8	(1)
C&M LEADMAN	2		2		1	(1)	1		1		1		1		1		1		1		1		1	
LT. EQUIP. OP.	3		6	3	4	(2)	4		3	(1)	3		3		4	1	4		4		4		3	(1)
HVY. EQP. OP.	3		3		3		2	(1)	2		2		2		2		2		2		2		2	
CREW ASST.	1		1		1		1		1		1		1		1		1		1		1		1	
TROUBLE PLUM.	1		1		1		1		1		2	1	2		2		2		2		2		2	
ZANJERO	4		4		4		4		4		3	(1)	3		3		3		4	1	4		3	(1)
PLUMBER	14		12	(2)	17	5	16	(1)	16		16		16		15	(1)	17	2	17		17		17	
HEAD ZANJERO	1		1		1		1		1		1		1		1		1		1		1		1	
FOREMAN	4		6	2	6		7	1	7		7		7		8	1	8		8		8		8	
PUMP OPERATOR	6		6		7	1	6	(1)	6		5	(1)	6	1	6		5	(1)	6	1	6		6	
ELECTRICIAN	2		2		2		2		2		2		2		2		2		2		2		2	
PAINTER	1		1		2	1	2		2		2		1	(1)	1		1		1		1		1	
METER REP.	2		2		2		2		2		2		2		2		2		2		2		2	
METER FOREMAN	1		1		1		1		1		1		0	(1)	1	1	1		1		1		1	
P&E MECHANIC	0		0		0		0		1	1	1		1		1		1		1		1		1	
WELDER	2		2		2		2		2		2		2		2		2		2		2		2	
SHOP CRAFTS.	1		1		1		1		1		1		1		1		1		1		1		1	
MANPOWER TOTAL	75		80		82		80		79		77		78		78		79		83		83		80	
NET (-) CHANGE			+5		+2		(2)		(1)		(2)		+1				+1		+4				(3)	

$$\text{NET INCREASE} = \frac{55+20-18-8-14+6+4+12-3}{12} = \frac{54}{12} = 4.5 \text{ MEN}$$

FISCAL YEAR 73-74

PUBLIC UTILITIES DEPARTMENT
ELECTRIC DIVISION

WORK TYPE FIELD OPERATIONS *

PERIOD NO.	PERIOD ENDING	NUMBER MEN	MAN-HOURS				PERCENTAGE		DELAY HOURS	OTHER RE-PORTED HRS	TOTAL HOURS PD.
			TOTAL	UNMEAS.	MEASURED	STANDARD	PERF.	COV.			
a	b	c	d (e+f)	e	f	g	(g/f)	(f/g)	h	i	(d+h+i)
1	7-26-73	77	5494.0	1316.3	4177.7	3794.8	90.8	76.0		167.5	5661.5
2	8-23-73	77	5862.6	1434.2	4428.4	3863.7	87.2	75.5			5862.6
3	9-20-73	76	6047.6	199.0	5448.6	4785.8	87.8	90.1	17.5		6065.1
FIRST QUARTER			17,404.2	3349.5	14,054.7	12,444.3	88.5*	80.8*			17,589.2
4	10-18-73	76	8226.6	1701.7	6524.9	5421.2	83.1	79.3			8226.6
5	11-15-73	76	4405.8	1752.0	2653.8	2330.7	87.8	60.2			4405.8
6	12-13-73	74	5413.6	2447.5	2966.1	2552.9	86.1	54.8			5413.6
SECOND QUARTER			18,046.0	5901.2	12,144.8	10,304.8	84.8*	67.3*			18,046.0
7	1-10-74	74	9648.5	2810.2	6838.3	5864.2	85.8	70.9			9648.5
8	2-07-74	74	5700.2	2969.8	2730.4	2342.0	85.8	47.9	8.0		5708.2
9	3-07-74	73	4489.9	1418.5	3071.4	2719.8	88.6	68.4	2.0	4604.2	9096.1
THIRD QUARTER			19,838.6	7198.5	12,640.1	10,926.0	86.4*	63.7*			24,452.8
10	4-04-74	72	6286.5	2471.2	3815.3	3220.8	84.4	60.7	49.0	807.5	7143.0
11	5-02-74	71	6841.7	2644.8	4196.9	3718.2	88.6	61.3	3.5	870.0	7715.2
12	5-30-74	71	5064.0	3067.0	1997.0	1698.7	85.1	39.4	14.0	4438.5	9516.5
13	6-27-74	70	6507.0	3107.8	3399.2	2945.3	86.6	52.2	6.0	339.5	6852.5
14	6-27-74									11,219.5	11,219.5
FOURTH QUARTER			24,699.2	11,290.8	13,408.4	11,503.0	86.4*	54.3*			42,446.7
FISCAL YEAR TOTAL			79,988.0	27,740.0	52,248.0	45,258.1	86.6	65.3	100.0	22,446.7	102,534.7

OTHER REPORTED HOURS (i) INCLUDES:

Sub-Station Construction	11,227.2
Transformer Shop ($\frac{1}{2}$ Year)	1,201.0
Meter Shop ($\frac{1}{2}$ Year)	3,078.0
Troublemens (3)	6,940.5

REMARKS: NON PRODUCTIVE MANHOURS (73-74)

Sick	4638.5	Rain Time	1480.4
Vacation	9886.5	Safety and	
Holiday	8332.0	Training	1278.0
Mil. Leave	120.0		
Ind. Acct.	2985.0	Total:	29,998.4
Bereavement	382.0		
Jury	896.0	*=Quarterly %	

PUBLIC UTILITIES DEPARTMENT
QUARTERLY COST SAVINGS REPORT

SECTION ELECTRIC

QUARTER ENDING 9-20-73

BASE PERIOD			CURRENT PERIOD		
ACTUAL HOURS ON STANDARD	STANDARD HOURS EARNED	PERF. % (A) (B)	ACTUAL HOURS ON STANDARDS	STANDARD HOURS EARNED	PERF. % (E ÷ D) (F)
A	B	C	D	E	F
41,395.7	30,591.4	73.9	14,054.7	12,444.3	88.5

ACTUAL HOURS NOT ON STANDARD THIS QUARTER	Avg. Perf. Incr. (C+F) ÷ 2	EQUIVALENT EARNED HOURS (G X H)	CURRENT AVERAGE HOURLY WAGE + 25% OVERHEAD	COST PER EARNED HOUR @ BASE PERIOD Perf % (J ÷ C)
G	H	I	J	K
3349.5	81.2	2719.8	7.28	9.85

CURRENT COST PER EARNED HOUR (J ÷ F)	SAVINGS PER EARNED HOUR (K - L)	TOTAL EARNED HOURS THIS QUARTER (E + I)	EXPERIENCED QUARTERLY COST SAVINGS (M X N)	PRIOR QUARTER'S CUMULATIVE TOTAL YTD Q	CUMULATIVE TOTAL YTD (P + Q) R
L	M	N	P	Q	R
8.23	1.62	15,164.1	\$24,566		\$24,566

PUBLIC UTILITIES DEPARTMENT
QUARTERLY COST SAVINGS REPORT

REVISION ELECTRIC

QUARTER ENDING 12-13-73

BASE PERIOD			CURRENT PERIOD		
ACTUAL HOURS ON STANDARD	STANDARD HOURS EARNED	PERF. % (B ÷ A)	ACTUAL HOURS ON STANDARDS	STANDARD HOURS EARNED	PERF. % (E ÷ D)
A	B	C	D	E	F
41,395.7	30,591.4	73.9	12,144.8	10,304.8	84.8

ACTUAL HOURS NOT ON STANDARD THIS QUARTER	Avg. Perf. incr. (C ÷ F) ÷ 2	EQUIVALENT EARNED HOURS (G X H)	CURRENT AVERAGE HOURLY WAGE + 25% OVERHEAD	COST PER EARNED HOUR @ BASE PERIOD PERF % (J ÷ C)
G	H	I	J	K
5901.2	79.4	4682.6	7.28	9.85

CURRENT COST PER EARNED HOUR (J ÷ F)	SAVINGS PER EARNED HOUR (K - L)	TOTAL EARNED HOURS THIS QUARTER (E + I)	EXPERIENCED QUARTERLY COST SAVINGS (M X N)	PRIOR QUARTER'S CUMULATIVE TOTAL YTD Q	CUMULATIVE TOTAL YTD (P + Q)
L	M	N	P	Q	R
8.59	1.26	14,987.4	\$18,884	\$24,566	\$43,450

PUBLIC UTILITIES DEPARTMENT
QUARTERLY COST SAVINGS REPORT

SECTION ELECTRIC

QUARTER ENDING 3-07-74

BASE PERIOD			CURRENT PERIOD		
ACTUAL HOURS ON STANDARD	STANDARD HOURS EARNED	PERF. (B ÷ A)	ACTUAL HOURS ON STANDARDS	STANDARD HOURS EARNED	PERF. (E ÷ D)
A	B	C	D	E	F
41,395.7	30,591.4	73.9	12,640.1	10,926.0	66.4

ACTUAL HOURS NOT ON STANDARD THIS QUARTER	Avg. Perf. Incr. (C+F) ÷ 2	EQUIVALENT EARNED HOURS (G X H)	CURRENT AVERAGE HOURLY WAGE + 25% OVERHEAD	COST PER EARNED HOUR @ BASE PERIOD PERF % (J ÷ C)
G	H	I	J	K
7198.5	80.2	5769.6	7.28	9.85

CURRENT COST PER EARNED HOUR (J ÷ F)	SAVINGS PER EARNED HOUR (K - L)	TOTAL EARNED HOURS THIS QUARTER (E + I)	EXPERIENCED QUARTERLY COST SAVINGS (M X N)	PRIOR QUARTER'S CUMULATIVE TOTAL YTD (P + Q)	CUMULATIVE TOTAL YTD (P + Q)
L	M	N	P	Q	R
8.43	1.42	16,695.6	\$23,708	\$43,450	\$67,158

PUBLIC UTILITIES DEPARTMENT
QUARTERLY COST SAVINGS REPORT

DIVISION ELECTRIC

QUARTER ENDING 6-27-74

BASE PERIOD			CURRENT PERIOD		
ACTUAL HOURS ON STANDARD	STANDARD HOURS EARNED	PERF. (B)	ACTUAL HOURS ON STANDARDS	STANDARD HOURS EARNED	PERF. (E + D)
A	B	C	D	E	F
41,395.7	30,591.4	73.9	13,408.4	11,583.0	86.4

ACTUAL HOURS NOT ON STANDARD THIS QUARTER	AVG. PERF. INCR. (C+F) ÷ 2	EQUIVALENT EARNED HOURS (G X H)	CURRENT AVERAGE HOURLY WAGE + 25% OVERHEAD	COST PER EARNED HOUR @ BASE PERIOD PERF %
G	H	I	J	K
11,290.8	80.2	9055.2	7.28	9.85

CURRENT COST PER EARNED HOUR (J ÷ F)	SAVINGS PER EARNED HOUR (K - L)	TOTAL EARNED HOURS THIS QUARTER (E + I)	EXPERIENCED QUARTERLY COST SAVINGS (M X N)	PRIOR QUARTER'S CUMULATIVE TOTAL YTD Q	CUMULATIVE TOTAL YTD (P + Q) R
L	M	N	P	Q	R
8.43	1.42	20,638.2	\$29,306	\$67,158	\$96,464

FISCAL YEAR 73-74

PUBLIC UTILITIES DEPARTMENT
WATER DIVISION

WORK TYPE FIELD OPERATIONS

PERIOD NO.	PERIOD ENDING	NUMBER MEN	MAN-HOURS				PERCENTAGE		DELAY HOURS	OTHER RE-PORTED HRS	TOTAL HOURS PD.
			TOTAL	UNMEAS.	MEASURED	STANDARD	PERF.	COV.			
a	b	c	d (e+f)	e	f	g	(e+f)	(f÷d)	h	i	(d+h+i)
1	7-26-73	64	6447.9	2371.6	4076.3	5610.0	89.3	63.2	28.6		6470.5
2	8-23-73	69	5619.3	1343.4	4275.9	5489.3	81.6	76.1	24.0		5613.3
3	9-20-73	70	4329.4	1144.0	3185.4	2722.2	85.5	73.6	26.3		4355.7
FIRST QUARTER			16,396.6	4859.0	11,537.6	9851.5	85.4*	70.1*			16,475.5
4	10-18-73	69	4772.3	1335.6	3436.7	3036.1	88.3	72.0	73.5		4845.8
5	11-15-73	68	7097.3	2058.1	5039.2	4322.6	85.8	71.0	70.3		7167.6
6	12-13-73	70	7091.4	4179.7	2911.7	2544.8	87.4	71.1	139.2		7230.6
SECOND QUARTER			18,961.0	7573.4	11,387.6	9903.5	87.0*	60.1*			19,241.0
7	1-10-74	68	6928.5	1915.2	5013.3	4171.7	83.2	72.4	33.0		6961.5
8	2-07-74	66	10,886.6	3006.9	7877.7	6969.1	88.5	72.4	52.9		10,939.5
9	3-07-74	68	4245.7	1637.6	2608.1	2171.8	83.3	61.4	39.2		4284.9
THIRD QUARTER			22,060.8	6561.7	15,499.1	13,312.8	85.9*	70.3*			22,185.9
10	4-04-74	70	10,487.7	4936.5	5550.7	4553.6	82.0	52.9	73.1		10,560.8
11	5-02-74	72	7712.7	2489.5	5223.2	4392.7	84.1	67.7	68.3		7781.0
12	5-30-74	72	6015.5	1309.0	4706.5	4223.6	89.7	78.2	30.8		6016.3
13	6-27-74	70	7865.4	2266.9	5598.5	4861.8	86.8	71.2	71.0		7936.4
14	6-27-74	76**									13,842.7 13,842.7
FOURTH QUARTER			32,081.3	11,001.9	21,078.9	18,031.7	85.5*	65.7*			13,842.7 46,167.2
FISCAL YEAR TOTAL			89,499.2	29,996.0	59,503.2	51,099.5	85.9	66.5	730.2	13,842.7	104,072.1

OTHER REPORTED HOURS (i) INCLUDES:

Troubleman Standby -----	620 Hrs.
Job Study -----	20.7 "
Tool Room -----	3818 "
Pump Operators -----	9384 "

* Quarterly %

** Includes Pump Operators

REMARKS: Non-Productive Charges:

Sick 3682.1 Caf/Train 2126.8 /

Vacation 7174.1

Holiday 6536.0 Total: 21,744.1

Ind. Acct. 608.0

Bereavement 445.0 Irrigation:

Jury Duty 336.0 13,917.4

Rain Time 834.1

PUBLIC UTILITIES DEPARTMENT
QUARTERLY COST SAVINGS REPORT

PIVISION WATER

QUARTER ENDING 9-20-73

BASE PERIOD			CURRENT PERIOD		
ACTUAL HOURS ON STANDARD	STANDARD HOURS EARNED	PERF. % (B ÷ A)	ACTUAL HOURS ON STANDARDS	STANDARD HOURS EARNED	PERF. % (E ÷ D)
A	B	C	D	E	F
23,987.9	15,088.4	62.9	11,537.6	9851.5	85.4

ACTUAL HOURS NOT ON STANDARD THIS QUARTER	Avg. Perf. Incr. (C ÷ F) ÷ 2	EQUIVALENT EARNED HOURS (G X H)	CURRENT AVERAGE HOURLY WAGE + 25% OVERHEAD	COST PER EARNED HOUR @ BASE PERIOD PERF % (J ÷ C)
G	H	I	J	K
4859.0	74.2	3603.0	6.05	9.62

CURRENT COST PER EARNED HOUR (J ÷ F)	SAVINGS PER EARNED HOUR (K - L)	TOTAL EARNED HOURS THIS QUARTER (E + I)	EXPERIENCED QUARTERLY COST SAVINGS (M X N)	PRIOR QUARTER'S CUMULATIVE TOTAL YTD Q	CUMULATIVE TOTAL YTD (P + Q) R
L	M	N	P	Q	R
7.08	2.54	13,454.5	\$34,174		\$34,174

PUBLIC UTILITIES DEPARTMENT
QUARTERLY COST SAVINGS REPORT

VISION WATER

QUARTER ENDING 12-13-73

BASE PERIOD			CURRENT PERIOD		
ACTUAL HOURS ON STANDARD	STANDARD HOURS EARNED	PERF. (B ÷ A)	ACTUAL HOURS ON STANDARDS	STANDARD HOURS EARNED	PERF. (E ÷ D)
A	B	C	D	E	F
23,987.9	15,088.4	62.9	11,387.6	9903.5	57.0

ACTUAL HOURS NOT ON STANDARD THIS QUARTER	Avg. Perf. Incr. (C+F) ÷ 2	EQUIVALENT EARNED HOURS (G X H)	CURRENT AVERAGE HOURLY WAGE + 25% OVERHEAD	COST PER EARNED HOUR @ BASE PERIOD PERF % (J ÷ C)
G	H	I	J	K
7573.4	75.0	5680.1	6.05	9.62

CURRENT COST PER EARNED HOUR (J ÷ F)	SAVINGS PER EARNED HOUR (K - L)	TOTAL EARNED HOURS THIS QUARTER (E + I)	EXPERIENCED QUARTERLY COST SAVINGS (M X N)	PRIOR QUARTER'S CUMULATIVE TOTAL YTD Q	CUMULATIVE TOTAL YTD (P + Q) R
L	M	N	P	Q	R
6.95	2.67	15,583.6	\$41,608	\$34,174	\$75,782

PUBLIC UTILITIES DEPARTMENT
QUARTERLY COST SAVINGS REPORT

DIVISION WATER

QUARTER ENDING 3-07-74

BASE PERIOD			CURRENT PERIOD		
ACTUAL HOURS ON STANDARD	STANDARD HOURS EARNED	PERF. % (E ÷ A)	ACTUAL HOURS ON STANDARDS	STANDARD HOURS EARNED	PERF. % (E ÷ D)
A	B	C	D	E	F
23,987.9	15,088.4	62.9	15,499.1	13,312.8	85.9

ACTUAL HOURS NOT ON STANDARD THIS QUARTER	Avg. Perf. Incr. (C+F) %	EQUIVALENT EARNED HOURS (G X H)	CURRENT AVERAGE HOURLY WAGE + 25% OVERHEAD	COST PER EARNED HOUR @ BASE PERIOD PERF % (J ÷ C)
G	H	I	J	K
6561.7	74.4	4881.9	6.05	9.62

CURRENT COST PER EARNED HOUR (J ÷ F)	SAVINGS PER EARNED HOUR (K - L)	TOTAL EARNED HOURS THIS QUARTER (E + I)	EXPERIENCED QUARTERLY COST SAVINGS (M X N)	PRIOR QUARTER'S CUMULATIVE TOTAL YTD Q	CUMULATIVE TOTAL YTD (P + Q) R
L	M	N	P	Q	R
7.04	2.58	18,194.7	\$46,942	\$75,782	\$122,724

PUBLIC UTILITIES DEPARTMENT
QUARTERLY COST SAVINGS REPORT

REVISION WATER

QUARTER ENDING 6-27-74

BASE PERIOD			CURRENT PERIOD		
ACTUAL HOURS ON STANDARD	STANDARD HOURS EARNED	PERF. % (B ÷ A)	ACTUAL HOURS ON STANDARDS	STANDARD HOURS EARNED	PERF. % (E ÷ D)
A	B	C	D	E	F
23,987.9	15,088.4	62.9	21,078.9	18,031.7	85.5

ACTUAL HOURS NOT ON STANDARD THIS QUARTER	Avg. Perf. Incr (C+F) ÷ 2	EQUIVALENT EARNED HOURS (G X H)	CURRENT AVERAGE HOURLY WAGE + 25% OVERHEAD	COST PER EARNED HOUR @ BASE PERIOD PERF % (J ÷ C)
G	H	I	J	K
11,001.9	74.2	8163.4	6.05	9.62

CURRENT COST PER EARNED HOUR (J ÷ F)	SAVINGS PER EARNED HOUR (K - L)	TOTAL EARNED HOURS THIS QUARTER (E + I)	EXPERIENCED QUARTERLY COST SAVINGS (M X N)	PRIOR QUARTER'S CUMULATIVE TOTAL YTD Q	CUMULATIVE TOTAL YTD (P + Q) R
L	M	N	P	Q	R
7.08	2.54	26,195.1	\$66,536	\$122,724	\$189,260

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